

ANTARCT

1958

②

REPORT

REPORT OF  
MINERAL RESOURCES  
CHIBOKA

---









block of str. flap-green. greys. Much  
sign of shearing at head of melt lake,  
many deep weathering & brown  
yellow or yellow brown staining.  
One block & bearing vegetation  
on the surface. Traces  
of copper in the gabbro  
esp. where pyroxene. Several  
blocks of pyroxene on west ridge  
of Kaiser Lake. Dip of country  
is  $30^{\circ}$  -  $45^{\circ}$  N. str. 11; on  
ridge N.E. of melt lake dip varies  
bet  $60^{\circ}$  +  $30^{\circ}$ .

One plateau S.W. of melt lake,  
the ridge is nearly all boulders.  
Large boulders (7' 6') are not common.  
Moraine would be about 35%  
boulders (6" - 6') mostly whit 18"  
maximum, 30% pebbles (1" - 6")  
20%  $\frac{1}{16}$  -  $\frac{1}{8}$ " and 10% fine sand  
&  $\frac{1}{16}$ ". In places mud is common,  
wet at the time, & lichen common,  
on it. Valley S.E. of melt lake is a  
cirque, vertical walls common right  
down to lake level. A small





valley joins west side to sea,  
probably glacial, as it has steep  
vertical sides.

At head of small inlet is a  
flat area, about 300 yds long,  
consisting of rounded shingle  
mostly 1-2" in diameter. Several  
large partly buried boulders are  
also found, and the whole  
large boulder in the moraine.  
This area is sharply dissected  
from the steep slopes of the  
moraine partly by a series of  
slopes of smooth ice (all  
snow covered) and partly by  
in the moraine slopes.



[illegible]

x P. 100



~~100~~ sh.  
dyne.

x peak.



at a height of 2000 feet. The  
 average height of the ice  
 about 1 foot high, and completely  
 undisturbed, in places. (The  
 direction of the wind is  
 from the south-east. The  
 from camp 4, an excellent  
 view of the ice field and of the  
 (the ice field) can be seen.  
 4 June 1930. Went out to  
 camp 1, and saw a few  
 in the ice field. The ice  
 was very hard, and the  
 valley floor. There were  
 ice, and a few small  
 snowdrifts. The ice was  
 very hard. After camp 1, I  
 (H) saw a few small  
 + saw a few small  
 the ice was very hard.  
 snowdrifts. The ice was  
 very hard. The ice was  
 very hard. (The  
 5 June 1930. Went out to  
 camp 5. The ice was  
 about 3000 feet, goes to camp 6.









16  
The second morning, we went about  
11:00 a.m. to the first of the  
camps, only one at each spot.  
After the camp, we saw across  
a valley of tundra to the  
mountain range of the  
Kamchatka N. 30° W. and then  
to the sea. The tundra is  
very low, and the mountains  
are very low, and the sea is  
very low. The mountains are  
very low, and the sea is  
very low. The mountains are  
very low, and the sea is  
very low. (p. 67)





Young age band of 52  
It is a 3rd. 7th. 11th.  
Some is 11th. 11th. 11th.  
Some have 11th. 11th. 11th.  
Some 11th. 11th. 11th.  
Some 11th. 11th. 11th.  
Some 11th. 11th. 11th.  
Some 11th. 11th. 11th.  
Some 11th. 11th. 11th.  
Some 11th. 11th. 11th.  
Some 11th. 11th. 11th.

It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.  
It is a 3rd. 7th. 11th.













Amundsen Bay. 23/11/58.  
Trail North of camp

Rock has alternating gabbro grains  
and qtz fclsp. grains. N 35° (mag)  
45 S. In parts of the latter are  
lenses of cg. blue qtz; in one place a  
lens 1 ft across off 1/2 ft ben + pyrox  
green + pyrox + small brk. flashes (cpx)  
At one end is a mass of the cg.  
lt ben? pyrox. The hole mass is  
surrounded by blue cg. qtz.

Several small sheets fail to strike,  
+ some small basalt dykes a couple  
of inches across. (or pseudotachylite-  
spec of frag on surface near dyke but  
1 ft wide).

In one place the qtz fclsp. grains  
cont large ben. garnets.

Copper staining in several places.  
Venus of bluish-purple qtz, locally common; these  
often cont fclsp. + sometimes garnets, +  
may grade into a garnet + qtz in the  
fclsp. green. In one place, a  
qtz vein sends offshoots into a



Band of of felsp green gneiss; the offshoot  
contains G. pyrox & ls, esp near top.  
Spec of of felsp green gneiss.

On point at S.W. corner of road there  
is local disturbance, prob. mainly faulting.  
Str. swings to N 120 mag, <sup>in one place</sup> though dip  
is same. Several small 'shears' N 70  
mag 80 S. Traces of blue gty are  
common, and there are also traces  
of pyrox & some felsp, and of almost  
pure garnet. Here there are also  
some bands of type sil gty - felsp green  
gneiss, & rather low green & content.

<sup>specimen 2001</sup>  
To the E of camp there is a lens 2 ft  
wide of the green colored pyrox &  
is at 10' long, and coincident  
with a fault at about rocks. (spec on)



Amundsen Bay 2/11/58.  
"Kilner Ranch".

Rock at foot of ascent edge N 20 mag  
405. Of purple-grey, numerous small, higher  
up ridge (i.e. higher stratigraphically)  
rocks are, gabbro, gneiss, foliated  
and porous, and some  
banding due to different grain  
size, esp. in the lower part (022)  
near the notch in the ridge rock  
becomes, blue, the purple (023)  
at the notch, showing in common,  
is slightly more, and there is  
a great deal of gabbro. The  
rocks are all very shattered in  
a band of about 10 ft. rock.

At 2030 ft (approx) on the  
banded rocks on the side of bluff 22 ft  
of camp N 185, 45° W (mag).





In modern Bay. 26/1/56.  
Find 5. 9.

Strike of bench ranges is  
variable. A north-south line is  
common. 2 days ago - crossing  
north line. But (20000) but  
some N-S strikes on surface  
to west part. There is a line  
is an Ordovician unconformity line shown  
in a road, the W. (photo 103.)

On ground.

At 3.4 - (thud from north)  
peak of trap point. (photo 101)  
The trap point is a small hill  
of basalt. A band of upperly... (p. 3)  
A fault line, just above the  
basalt, is the  
... of the institute. (p. 4)  
12.5, 20 N. ...  
... ..  
... ..







There is a basal layer of  
stratified, straight, and  
solid.

At the same time, the  
stratification is broken up  
by small, irregular, and  
irregular, and is very  
common.

The same is all angles, much of it is  
just a layer of ice. The  
blocks are left but not the  
less than 1 foot, and it is  
common. There is hardly any  
mottling, just of the isolated  
dip is only in shallow dip.  
The small, separate, between  
the layers, not the usual  
blue color. The color is violet  
in most places, except near the  
junction of permanent dip and  
local, which is just a small  
dip. These are the same  
color of the dip, and the  
color of the dip, and the



1.5 m. in the first  
 stage of the production of *Sparganium*.  
 On the surface of the drift, there are  
 scattered pieces of *Sparganium*  
 etc. - some, probably, only shelled  
 fragments of the complete *Sparganium*  
 which the ice  
 of the ice sheet has carried down  
 the glacier. A few small *Sparganium*  
 fragments of the permanent drift  
 beds can be seen in the water near  
 the edge of the ice sheet.  
 The *Sparganium* zone and  
 drift dip to the N. W. of the  
 ice sheet.

The *Sparganium* ph. of the dip is about  
 20° - 30° N. 40°  
 dip 50-60° E. (local)  
 The *Sparganium* ph. of the dip is about  
 N 140°, dip 50-60° N. & dip  
 100-120° N. dip 50-60° N.  
 and 110-120° N. dip 50-60° N.  
 common





On the NW corner of Am. Bay is  
a small lake, a dirty green  
colour. In a depression  
rocks no lot of vegetation. A couple  
of hundred feet across.

In rock horse shoe at end of  
crevasse on side of lake  
is a small pond, with  
red, brown water. In  
middle stream running out from  
rock.





P2 also contains some, and  
 has a thin seam of strongly  
 mineralized material.

On the side of mountain of  
rocks are exposed mainly  
a bluish grey to blue  
sparsely and slightly of  
amphibole & pyroxene  
These are also scattered with  
bands of a pattern  
concentrating very like the  
green feldspar (Spil). In bands, a  
of the like this is iron stained  
green, and copper staining which  
is a little more greenish  
this (Spil). In the same  
bands are waterworn with the  
of the bands, one grading into  
the other. (photo)  
In the blue-grey bands  
from 2 to 3 inches in a couple of  
wide of the slab. Still, &  
scattered very pale pink pyroxene  
There are also some scattered  
met basic dikes?, what is it?



(sp.) concentrations of  
white ... edges, + tongues of  
this of ... is in this ...  
... are ...  
... of rocks slightly ...  
N 110 mag, 20 N.

At S.E. corner is a band of  
... at 20 ft thick.  
Brazite is mg. ... almost pure  
... in central parts, slightly  
... within 6 inches  
of margin, which is ...  
of ... of ... in the central  
part. This ... is  
discontinuous + ... in  
one section. Thin tongues of ...  
go from band into adjoining ...  
... style.

... is a ...  
... 1170 mag ...  
... (sp.)

Country ...  
... has ...  
undergone much ...





unmelted and black are  
showing a movement was  
downwards from top. This face  
of nunatak is slightly concave &  
was prob. an incipient crag.  
A few boulders of a magnetic  
pyrox. feldspar, with c. 15%  
mag. were noted, but not seen  
in situ.

General appearance of the  
cliff looking northward  
towards the (3 or 4 miles  
high peak, feldspar) and probably  
is a good deal of distance.  
Fibration most on south side  
of the mountain and probably  
is a good deal of distance.  
S. of end in base of mount. There is  
a large permanent ice drift  
running off west and  
down, with some water's  
then snow cover.



12th.

1/10/58.

Hard red-brown rock are frequent  
off old dunes. Griggs is white here  
at Amundsen Bay, with only  
a poor foliation. About 20-50  
ft, & some small pieces of pyro-  
clastic material of mass, in some  
places are bands of white massive  
stone, & some red limestone  
in pits & cracks. Rocks are all  
very old.

Off the corner of main a  
large hole in water of brown  
mud water in it. It looks like  
a radiation pool, & is filled  
slightly over rising walls (photo)  
for the water it looks up to the  
level of the surrounding hills  
above the general level of the plain.

2nd. thing w.



the men were not enlarged, and off  
that end of the boat, and off having  
joined across the moat, the  
rest of it being kept  
back by wind.

next to it being kept  
flat by wind  
scooping. There  
are no crevices at  
all visible in its  
sides.

At end of peak, on lower part of  
upper are bands of greenish shale  
about 30 ft. thick. Below this  
a thin layer of white limestone which  
appears to be a thin bedded  
bedding of rocks. Several series  
of thin beds (about 10 ft. thick). One  
has a good deal of copper  
mineralization. The lower part  
of the section is a thin bedded  
at base of section very much like  
some parts are rather coarse  
and have an almost horizontal  
bedding.









... of the ... and  
... of the ... and  
... to the ...

...  
...

...  
...  
... and  
... either

a ...



42. 22  
rocks are mainly. ben. feldspathic  
granites like those. but there is a  
numerous bands of gabb. green but here  
in size is more variable in body  
types, and it is a ben. rather than  
the colour. The f. m. type is  
common in the f. p. type, and  
a coarser, almost granitic textured  
type, <sup>sp. 1, 2</sup> <sup>sp. 1, 2</sup> <sup>sp. 1, 2</sup> (spec. 1, 2) The gabb.  
fr. is the f. m. type. some rather  
coarser bands. There are also  
some bands of greenish f. m.  
prob. chloritized pyrox. (spec. 1, 2) and  
these occur near strongyphered  
area near S.W. corner. At one  
place in the gabb. is a segregation  
cont. pyrox. list and a green  
? amphibole (spec. 1, 2). The different types  
are segregated into groups and the  
whole is surrounded by a band of  
qtz. an inch or so wide.

A few rounded size dk. spots  
occur along some horizon. On the



yellowish-brown color. A few bands  
of thin brown material of same  
color.

White crystalline, etc. are very  
common on the rocks in place,  
and some copper staining, etc.  
also. <sup>Calc. & pyrite & pyrite or</sup> No. 1. <sup>Actinolite</sup>

Str. varies - 111° 2' 30N (gr) +  
N 90, 20N (fine), which is the  
dominant one. In one place  
the mg. gabbro weirs grades into  
pure pyroxenite (black in color),  
but only bands seen.

These at S. W. corner of N 110  
80 N. Rocks along it are crushed  
& connected to black mylonite.  
The feldspar in the gabb. is chloritized  
and the feldspar granulated. In  
extreme cases, the rock is converted  
to a massive aggregate of idioite  
and feldspar specks. A couple of  
fraggs. of basalt? found (spec.)  
Quartz is common, and  
they are all slightly banded. The  
zone itself is about 10 ft thick.



large, rounded with angular  
edges, which is prob. more or  
less in situ. On the flatter areas  
polygons abt. 4 ft across are  
poorly developed with the coarse  
fragments around the margins.  
The coarsest frags are abt. 18"  
across, & 6" - 1 ft very common  
& ranging down to fine sand.

Only possible exotic was a pink  
shredded polypropylene & epoxide  
film fragments. Occurred as  
several frags. in one spot, & could  
possibly be in situ. No rounded  
frags. of any sort seen.

For info in the quarry.  
Otherwise is a mistake.

Thick is present mostly in coarse  
angular blocking fragments, & with  
up to 12" across, a few larger.  
Does down to fine sand in other  
places. Soil polygons developed in  
varying degrees of perfection, but





about 20 feet across with 10 foot  
sides, and larger fragments up  
to 18" on outside, fine sand &  
gravel inside. A few o'craps  
lying about, N 90 (mag) 500 ft. some  
showing in places. Rocks in situ  
from moraine same as those seen  
this morning, gneiss predominating.  
Cretaceous in places. Only new  
types seen were a float one of  
m. ss epidote, & sharp edge against  
its gneiss rock (spec) and some  
schistose muscovite - epidote  
rock, & a paper of muscovite  
detrital. A large pale green epidote.  
Off S.W. side of summit is a well  
developed U shaped glacial valley,  
& moraine pile at its mouth.  
Left topped summit to south  
Another rock (a glacial circle  
in side) & less well developed  
to foot of summit (photo) lot of  
slan and old stuff above water  
at wind.



2000 ft. - 11. 11. 1900

560

11. 11. 1900

560

600

560

560

↓  
N.

Large blue ice between 1st & 2nd  
camps, covered with ice  
moulds on it. Some blue  
ice is in middle part camp 2 (over  
shaded by dome) then snow, &  
some white ice covered on  
front of domes. Distance 9 miles  
from camp 2 N 30° (way) to  
long white narrow line N 20°.

1st 11. 11. some white ice on left side  
to 1 mile past camp 2, then  
some white ice on right side  
of line. Distance 9 miles  
from camp 2 to 1 mile past camp 2

about 2000 ft.

July 1st at camp 10. Starting  
11:30 AM. Windy. Sun. 11:00 AM  
Open road to the saddle, etc.

July 2nd at camp 11. Starting  
11:30 AM. Windy. Sun. 11:00 AM  
N.W. wind.

July 3rd at camp 12. Starting  
11:30 AM. Windy. Sun. 11:00 AM  
N.W. wind.

July 4th at camp 13. Starting  
11:30 AM. Windy. Sun. 11:00 AM  
2-3 miles to camp 13. Much  
soft snow, little or no drift.  
Wind appears to be N.W., but  
there is a strong S.W. wind to  
blow.

July 5th at camp 14. Starting  
11:30 AM. Windy. Sun. 11:00 AM  
2-3 miles to camp 14. Much  
soft snow, little or no drift.  
Wind appears to be N.W., but  
there is a strong S.W. wind to  
blow. (The wind is very strong  
and the snow is very soft.)

12/11. Hard white ice on top  
 and along the shore line,  
 composed of large ice  
 blocks, no snow, water  
 deep, ice in the water.  
 12/12. Same as 12/11.

12/13. Hard white ice on  
 very level ground, ice on  
 top of dunes, ice on  
 shore line, but not on water.

12/14. Hard white ice on  
 level ground, ice on  
 in gaps, there was the white  
 ice on the shore.

2042. The glacier is a  
dark greyish blue (with  
brown patches of rock) and  
the surface is rough & craggy  
(the surface is covered with  
small stones & pebbles).

2043. The glacier is a  
dark greyish blue (with  
brown patches of rock) and  
the surface is rough & craggy  
(the surface is covered with  
small stones & pebbles).

The glacier is a  
dark greyish blue (with  
brown patches of rock) and  
the surface is rough & craggy  
(the surface is covered with  
small stones & pebbles).







4/11 - meeting on the 10th of April  
by 2:30 - meeting on the 10th of April  
by 2:30 - meeting on the 10th of April  
by 2:30 - meeting on the 10th of April

July 11. 1900. 1st day of the trip.  
Left camp at 11:30 a.m. for  
Camp 12. The trail is  
very good. The country is  
very beautiful. The mountains  
are very high. The water is  
very clear. The air is very  
fresh. The food is very good.  
The trip is very interesting.

July 12. 2nd day of the trip.  
Left camp at 11:30 a.m. for  
Camp 13. The trail is  
very good. The country is  
very beautiful. The mountains  
are very high. The water is  
very clear. The air is very  
fresh. The food is very good.  
The trip is very interesting.

July 13. 3rd day of the trip.  
Left camp at 11:30 a.m. for  
Camp 14. The trail is  
very good. The country is  
very beautiful. The mountains  
are very high. The water is  
very clear. The air is very  
fresh. The food is very good.  
The trip is very interesting.

Distance 12 miles from camp  
11:30, with some other N.C.O.  
3/14. Left 8.6 a.m. for the  
camp 11:30. The trip  
is very interesting.

P. 74.

E. sound at night of 12th Nov 1852  
some and some of the 12th Nov 1852  
on each part of the 12th Nov 1852  
some of the 12th Nov 1852  
at 12th Nov 1852  
12th Nov 1852

at 12th Nov 1852  
12th Nov 1852

at 12th Nov 1852  
12th Nov 1852

# INDEX

Page

Subject

3-13, 20-29

Amundsen R. Camp 2200.

27-33

High Range (5000) Amphitheatre Lake

31-33

Antarctic C. G. River Notes

34-

High Range

35-

Antarctic

36-

High Range Mt. King.

Glaciology throughout

0016